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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,182	10/21/2003	Lee Shombert	CISCP836	3936

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EXAMINER	
KEEFER, MICHAEL E	

ART UNIT	PAPER NUMBER
2454	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/690,182	SHOMBERT ET AL.	
	Examiner	Art Unit	
	MICHAEL E. KEEFER	2454	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 October 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,7-12,18,19,21 and 23-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,7-12,18,19,21 and 23-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the Amendment and RCE filed 10/30/2008.

Claim Objections

2. Claim28 objected to because of the following informalities: This claim is missing a period at the end of the sentence. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-4, 7-10, 12, 18, 19, 21, 23, and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Semaan et al. (US 7181534), hereafter Semaan, in view of Wootton et al (US 6128298), hereafter Wootton and further in view of Templin et al. (US 5781550), hereafter Templin.

Regarding **claims 1, 7, and 8**, Semaan discloses:

A gateway network element that provides access to network elements that are not directly reachable, comprising:

a processor that is directed by code; code that receives and sends packets over a first IP based interface to a first network; code that receives and sends packets over a second IP based interface to a second network, wherein IP addresses of network elements in the second network are not visible to network elements in the first network; (See Fig. 1, GNE sends and receives packets from IP networks

104 and 105, and ip addresses in network 105 are not visible to network 104, see Col. 4, lines 36-40, the operator only sees the gateway network element address, and not the individual addresses of the devices inside that network)

wherein the first network is a Data Communications Network (DCN) and the second network is a Data Communication Channel (DCC) and the code that applies said filtering rules provides separation between the DCN network and the DCC network. (The EDCN 105 is a DCC, and the ADCN 104 is a DCN, and the GNE provides separation between the two by performing address translation between the networks.)

Semaan discloses all the limitations of claims 1, 7, and 8 except for: code for categorizing the received packets based on the interface over which the packet was received, type of packet, and whether the destination address specifies the gateway network element; and code that selects and applies a set of filtering rules to the received packets based on a category of the received packet, wherein each set of said filtering rules differ from said other sets of filtering rules Wootton teaches:

code for categorizing the received packets based on the interface over which the packet was received, type of packet, and whether the destination address specifies the gateway network element; and code that selects and applies a set of filtering rules to the received packets based on a category of the received packet, wherein each set of said filtering rules differ from said other sets of filtering rules. (Wootton teaches categorizing packets based off of what

interface they are received (i.e. Col. 5, lines 30-36, "The IP filter accepts no connection requests from the public network." This shows that packets that are categorized as being from the public network interface are filtered if they are not of a certain type, Wootton also teaches determining whether packets have the correct protocol (i.e. are of a certain type), see Col. 2 lines 53-57.)

Therefore, the general concept of placing an IP filter within a gateway network element is well known in the art as taught by Wootton.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Semaan with the general concept of placing an IP filter within a gateway network element as taught by Wootton in order to increase the security of the DCC (Wootton, abstract).

Semaan and Wootton teach all the limitations of claims 1, 7, and 8 except for categorizing packets based off of whether the destination address specifies the gateway network element.

The general concept of treating packets differently based upon the destination of the packet is well known in the art as taught by Templin. (See Col. 6, lines 10-22, which discloses treating a packet destined to the gateway B different than a packet destined to the foreign host C, thus the packet has been categorized as destined to gateway b, and different sets of rules have been applied because of this categorization.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Semaan and Wootton with the general concept of treating

packets differently based upon the destination of the packet as taught by Templin in order to provide a gateway with strong security. (Templin, Col. 3, lines 8-9)

Regarding **claims 2 and 9**, Wootton teaches:

code that sends packets over the first IP based interface only when the packets specify the gateway network element as the source. (Col. 5 lines 37-55 disclose that packets destined for the public network (i.e. the first interface) have the private IP address information removed from the packet so that the packet appears to have come from the filter.)

Regarding **claims 3 and 10**, Wootton teaches:

code that accepts packets received over the first IP based interface if the destination address specifies the gateway network element, a subnet broadcast address or a multicast address. (Col. 5 lines 16-20 state that all incoming traffic from the public network to the private network addresses the IP filter, thus it accepts packets on the public interface that specify the destination as the IP filter.)

Claim 18 is the combination of claims 10 and 11 which are rejected above. Similiar reasonings apply to the rejection of this claim.

Regarding **claims 19, 25, and 27-28**, Wootton teaches:

wherein one set of filtering rules filters-to packets received over the first IP based interface with a destination address of the gateway network element and-a another of filtering rules filters packets received at the second IP based interface with a destination address of the gateway network element. (Col. 5, lines 30-36,

"The IP filter accepts no connection requests from the public network." This shows that a different set of rules are applied to requests destined to the gateway from one interface as opposed to the other interface. (I.e. connection requests are filtered from one interface, and not from another).

Regarding **claim 23**, Wootton teaches:

The first network in Wootton is a WAN, and the second network is a LAN, as cited above.

Regarding **claims 4, 12, 21, and 26**, Templin teaches:

A proxy server that provides forwarding between IP addresses of two networks. (note the proxy functionality in Fig. 1 and 5)

5. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over Semaan, Wootton, and Templin as applied to claim 8 above, and further in view of Vu (US 5623601).

Semaan, Wootton, and Templin teach all the limitations of claim 11 except for accepting packets from the private network that are addressed to the gateway. The general concept of a gateway accepting packets that are destined for it is well known in the art as taught by Vu. (Col. 8 lines 38-50 teach a gateway accepting packets from the private network that are addressed as being destined for the gateway)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Semaan, Wootton, and Templin with the general concept of a

gateway accepting packets that are destined for it as taught by Vu in order to allow the use of a UNIX device as the gateway.

6. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Semaan, Wootton, and Templin as applied to claim 7 above, and further in view of Milliken (US 2003/0115485).

Semaan, Wootton, and Templin teach all the limitations of claim 7 except for forwarding a filtered packet for analysis.

The general concept of filtering (saving) a packet for analysis is well known in the art as taught by Milliken. (see [0068] which teaches saving (i.e. forwarding) a dropped packet for further analysis)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Semaan, Wootton, and Templin with the general concept of filtering (saving) a packet for analysis as taught by Milliken in order to allow diagnostic analysis of network errors.

Response to Arguments

7. Applicant's arguments with respect to claims 1-4, 7-12, 18-19, 21, and 23 have been considered but are moot in view of the new ground(s) of rejection.

8. The Examiner would like to make a few observations about the claims. First the limitation that "the code that applies said filtering rules provides separation between the DCN and DCC network." does not appear to actually limit the claim, but only describe the intended use of the filtering rules. Referring to Applicant's specification, the Examiner notes that a goal of the invention is to provide the separation functionality that

was lost when DCC networks began to convert to the IP model from the OSI model. However, the functionality of this separation is not found in the claims, nor has the examiner been able to find what specific functionality of the OSI/IP separation Applicant is intending to emulate using filtering rules.

9. The Examiner also notes that it is believed that Applicant's intent for claims 3, 10, and 11 is that the GNE -only- accepts packets when they fufill this criteria, and otherwise will drop/reject these packets. With the current language of these claims, an element that always accepted any packets over the interface would read on the claim, since the packets accepted would include the types of packets listed in claim 3 (for example).

10. The claims have been given their broadest reasonable interpretation in view of the prior art in the rejections above, and the above notes are intended to give Applicant insight into the Examiner's reasons for rejection, and possible routes for amendments to overcome the prior art. If Applicant wishes, the Examiner is available for interviews to discuss claim amendments prior to submission to ensure that they will overcome the art of record.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL E. KEEFER whose telephone number is (571)270-1591. The examiner can normally be reached on Monday through Friday 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MEK 1/8/2008

/Nathan J. Flynn/
Supervisory Patent Examiner, Art Unit 2454